

Washington State Department of Transportation Ferries Division Revised Draft Long-Range Plan

January 31, 2009





About Washington State Ferries

Formed in 1951, WSF is the largest ferry transit system in the U.S.

WSF serves about 23 million passenger and vehicle trips per year;

Operates 10 ferry routes and runs nearly 500 sailings per day;

Provides service to eight Washington State counties and the Province of British Columbia;

Operates and maintains 20 terminals from Point Defiance to Sidney, B.C.; and

Provides priority loading for freight, bicycles, vanpools, and carpools.



Washington State Department of Transportation Ferries Division

Revised Draft Long-Range Plan: 2009-2030

Revised Draft Long-Range Plan



Washington State

Department of Transportation

Ferries Division

January 31, 2009

CLINTON

O MUKILTE

IGSTON EDMONDS

IBRIDGE

SEATTLE

/ORTH

FAUNTLEROY

VASHON

TAHLEQUAH



Americans with Disabilities Act

Individuals requiring reasonable accommodation of any type, including preparation of this material in alternate formats, sign-language interpretation, and physical accessibility accommodations, may contact Joy Goldenberg at GoldenJ@wsdot.wa.gov or (206)515-3411. Persons with hearing impairments may access Washington State Telecommunications Relay Service (TTY) by dialing 7-1-1 and asking to be connected to (206)515-3913.

Title VI

The Washington State Dept. of Transportation (WSDOT) assures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination based on race, color, national origin and sex in the provision of benefits and services. For language interpretation services please contact Hadley Greene at (206)515-3913. It is necessary to speak limited English so that your request can be appropriately responded to. For information on WSDOT's Title VI Program, please contact the Title VI Coordinator at (360)705-7098.



EXECUTIVE SUMMARY

The Washington State Department of Transportation Ferries Division (WSF) is developing its Long-Range Plan at a historic point in the State's marine transportation system. WSF carries nearly 23 million riders annually and demand for ferry service is projected to increase as population in ferry-served communities grows. The system is constrained by tight financial resources, limited vehicle carrying capacities especially during peak periods, and aging vessels and terminals. This planning effort has been based on specific legislative direction from the 2007 session, and the Plan will not be finalized until after the 2009 legislative session closes. The Final Plan will guide WSF future service and investment decisions through the year 2030.

In the 2007 legislative session, the Legislature passed Engrossed Substitute House Bill (ESHB) 2358 ("the Ferry Bill") and its biennial transportation budget that contained specific directives related to how WSF is currently providing services and how it should be planning to meet the needs of ferry communities served by marine transportation in the future.

The Legislature spelled out a series of specific planning requirements to address the long-term funding crisis for the ferry system. In particular, the Legislature said WSF needed to:

- Reconnect with its customers to get better information about their travel
- Improve its forecasting approach to ensure its plans are based on the best projections of future needs
- Develop strategies to minimize costs
- Implement adaptive management practices to keep costs as low as possible while continuously improving the quality and timeliness of services.
- Consider operational and pricing strategies that would improve asset utilization and reduce costs
- Re-establish the vehicle level-of-service standard to better fit with current policy and funding realities

1.1 Purpose

The goal of this Revised Draft Long-Range Plan is to document the results of the assessment of the needs of ferry customers and develop two service and capital programs that present the bookends of a plausible range of future ferry funding needs. This document represents a new version of the Draft Long-Range Plan that was



released on December, 19, 2008, which incorporates the feedback from affected stakeholders, including customers, residents of ferry communities, and local jurisdictions.

This Revised Draft Plan marks the beginning of the policy discussion that will take place during the 2009 legislative session, and displays for the communities, the Legislature, and the Governor a range of options that seek to balance achievable service goals and funding requirements.

A number of the specific tasks called out in ESHB 2358 require WSF to take a fresh look at how ferry services may be delivered in order to support current and future customers, while recognizing the significant financial challenges facing the ferry system.

Given the current economic conditions, the scale of the funding needs that the State is facing, in addition to the continuing financial demands of the ferry system, it is unclear if the State can realistically keep up with the challenges. It is therefore necessary to consider the implications of a future where the State takes a different role in funding the ferry system.

As a result of these challenges, this Revised Draft Plan puts forward two options for consideration:

- Scenario A. This option assumes that current levels of service remain constant with minor improvements, operational strategies are implemented over time, and several new vessels come online. The State will continue in its current role as owner, operator, and principal funder of ferry services in the Puget Sound region. This Scenario contains a significant budget shortfall that will require new revenues.
- 2. Scenario B. This option recognizes that the State may not be able to provide sufficient new revenues to meet the evolving needs of all ferry customers and communities, and looks at a reduced marine highway system. While Scenario B does envision some impacts in 2009-11, the major impacts of this scenario would not take place until the 2011-13 biennium. This provides time for the State to engage local governments in a dialogue about how, working together, we may be able to mitigate the negative impacts. This Scenario assumes operational strategies would be implemented over time. It also contains a budget shortfall, but it is significantly smaller than in Scenario A.

Key Policy Issues

The Revised Draft Long-Range Plan presents two possible future service and investment scenarios and the supporting documentation to provide the necessary information for the Legislature to engage in a dialogue and timely resolution of three key strategic issues:

- 1. Operational strategies, particularly the proposed free vehicle reservation system;
- 2. A fleet procurement plan, with timing and sizing of vessels; and.
- 3. A funding plan, identifying an adequate and sustainable source of long-term capital funding.

At the conclusion of the 2009 legislative session, a Final Long-Range Plan will be developed based on the direction given on these key questions.

1.2 Public Involvement in Plan Development

The Draft Long-Range Plan was developed with extensive public input at 26 public meetings and workshops in ferry-served communities between March 2008 and October 2008. The focus of the meetings was on the requirements of ESHB 2358 or the building blocks of the Plan, including ridership demand, level-of-service standards, pricing and operational strategies, and baseline funding challenges.

In early January, WSF conducted a total of ten public hearings to present the Draft Plan and to listen to public testimony. The public hearings were well attended with over 1,300 individuals that signed in and nearly 400 who chose to testify.

In addition to the public testimony at the official public hearings, WSF has been collecting feedback through emails, letters, and news accounts. In total, WSF received more than 800 comments on the 2008 Draft Long-Range Plan between December 19, 2008 and January 26, 2009. Appendix K includes copies of the written feedback received from agencies and local governments, and Appendix L includes the public comments received at the hearings and by email.

The comments at these public hearings touched on a range of subjects. The comments we heard most frequently at each of the ten hearings and in reading through the written submissions were grouped into themes. The following key themes emerged:

- WSF should be treated as part of the state highway system
- Economic impacts should be considered
- The plan does not adequately address ridership growth



- Concern about a vehicle reservation system
- More information is needed on what WSF is already doing to reduce costs
- Consider building vessels out of state if it saves money
- Scenario B includes an unfunded state mandate for locals to provide passenger-only service

This Revised Draft Plan includes additional information and material based on comments heard at these meetings. Also, the specific proposed service and investment plans have been updated to reflect feedback as well.

1.3 Challenges

While the foremost challenge facing WSF is the lack of a predictable and sustainable source of capital funding, there are several critical challenges that the Revised Draft Long-Range Plan must address.

Long-Term Funding. Much has changed since the last Long-Range Plan for WSF was adopted in 1999; most profoundly the voter approval of I-695 and the corresponding budget cuts, which substantially reduced dedicated funding for the ferry system. For the last ten years, the Legislature has filled the funding gap created by the I-695 budget cuts by allocating transportation funds to WSF that would have otherwise supported the landside highway system. Given the unfunded needs in the landside highway capital program, this is unsustainable. Therefore, the ferry system lacks sufficient dedicated revenue to sustain its current level of service.

Role of Fares in Long-Term Funding. One of the impacts of the lost funding has been a significant increase in fares over a relatively short period of time. Since 2000, fares have increased between 37% and 122%. WSF's operation is 70 percent supported by fares (2007 fiscal year), compared to approximately 60 percent in fiscal year 2001.

Aging Asset Base. WSF's fleet is among the oldest of any major ferry operator, with four vessels recently retired on an emergency basis and eight additional vessels to be retired over this planning horizon. Also, many of the current terminal facilities were built in the 1940's and 1950's and have had few improvements beyond basic maintenance and preservation since they were built. WSF is facing a significant recapitalization effort in the next 20 years related to aging vessels and facilities.

Long Lead Times for Capital Investments. A long-range capital plan is necessary because decisions about ferry service have long-term implications. There are significant lead times required to build new vessels or improve terminals, so WSF must anticipate the future need for such improvements today.

Vehicle Capacity Limitations during the Peak. The ferry system's greatest capacity constraint and the origin of the pressure for additional services and larger facilities is vehicle capacity during peak periods. There is little capacity to support vehicle growth in these time periods, especially in the summer, when a recreational traffic surge causes even greater capacity challenges.

Growth, Ridership Demand, and Service Needs. Although WSF carries nearly 23 million riders annually, ridership is down almost 15% since its peak in 1999. While there is population growth expected in many of the communities served by WSF, it is not clear precisely how this will translate into increased demand for ferry services. Ridership has declined from 2000 to 2006 throughout the system despite population growth in counties served by WSF, ranging from 14% in Island County to 4% in Kitsap County during the same period of time. There are policy choices regarding the type of service that should be provided to balance customer convenience, community needs, and effective use of assets.

1.4 Customers

ESHB 2358 directed the Washington State Transportation Commission to conduct a comprehensive survey of ferry customers to help inform level-of-service, operational, pricing, planning, and investment decisions. The legislation requires the survey to be updated every two years. The initial survey, conducted in 2008, included on-board surveys of 13,000 customers, focus groups, and a general market phone survey of 1,200 Puget Sound residents, and identified several important findings that have helped shape this Plan.

Importance of ferry service. The survey found that residents throughout Puget Sound use the ferries and think they are an important service.

- The general market survey (telephone survey of Puget Sound residents) found that 91% of all residents in the region have ridden WSF at some point in the past.
- 95% of Puget Sound residents, including East Sound (95%), West Sound (98%), and Island (100%) residents responded that ferries are very important (70%) or somewhat important (25%). (General Market Survey)

Our ridership base is changing. Today, we have fewer commuters and more discretionary trips as a percentage of total ridership. Approximately one-third of WSF customers travel for the purposes of work or school (i.e. make non-discretionary commute trips), although during peak periods, over half of the system's riders are commuters. This reduction in commute trips has also been observed in recent WSF Origin-Destination Surveys (conducted in 1993, 1999, and 2006), which have shown a gradual decrease in the peak period commute.

Our riders travel less frequently and have more flexibility than was expected. The average vehicle customer makes 16 one-way trips per month. For about half of the customer base, frequency of use has not changed over time. Thirty-three percent of the customers surveyed said they have been riding ferries more frequently (15% said they have been riding significantly more). With respect to flexibility, 8% of peak period vehicle travelers said they could shift to off-peak times, indicating that strategies geared toward time shift (like a vehicle reservation system) could be effective in reducing congestion during the peak.

Fares are only one factor affecting use of ferries. While the survey confirmed WSF's fare sensitivity estimates (a 10% fare increase would result in a 4% drop in riders), the general telephone survey (not just current customers) found fares to be a small factor in why some persons are using WSF less. Also, a majority of customers in the on-board surveys believe that ferry services reflect a good value and are pleased with the services they are receiving.

1.5 Changing Our Business

Steps have been taken to reduce ferry system costs without jeopardizing safe, reliable, and efficient service. Administrative staff reductions, fuel conservation measures, and reduced expenses throughout the system have resulted in cost savings. These reductions are part of an ongoing cost containment process designed for continuous improvement in the cost effectiveness of ferry services.

WSF must also adopt operational and pricing strategies to maximize the use of its existing assets and provide the most cost effective service, while responding and adapting to the changing characteristics of its customer base.

This approach will change how customers interact with the ferry system and allow WSF to provide the best service at the lowest possible cost. Following this approach, both of the plan scenarios are built on the following key strategies that are designed to either spread vehicle demand to non-peak periods and/or increase walk-on use:

 Vehicle Reservation System. The most important operational strategy recommended in the Revised Draft Plan is the deployment of a vehicle reservation system. A free, well-designed reservation system would allow WSF to operate with the smallest possible terminal facilities while maintaining a high level-of-service. The system would be tailored to specific route-level demand and market conditions. We heard from many people concerning the vehicle reservation system, and have attempted to address the issues surfaced.

- Transit Enhancements. WSF has the ability to accommodate significant growth in ridership with existing facilities if more customers elected to travel as walk-ons. The single biggest impediment to walking on is the lack of sufficient transit supportive facilities and services. This plan proposes a mix of WSF investments in its own facilities and identifies local transit service needs to maximize the potential walk-on ridership in the future.
- Pricing Strategies. The Plan makes three significant pricing strategy proposals. The first two are focused on demand management: (1) not charging an extra fee for reservations to encourage customer use of the system; and (2) increasing passenger fares at half the rate of vehicle fares. The third is targeted to mitigating fuel price risk and proposes (3) implementing a fuel surcharge mechanism that will automatically adjust fares up and down for fluctuations in fuel prices.

1.6 The Revised Draft Plan

The Revised Draft Plan presents two possible visions for the future of the WSF system. The first assumes that current levels of service remain constant with minor improvements and the State continues its role as principal owner and operator of the marine transportation system in the Puget Sound region. The second is a reduced state marine highway system. Under this scenario, the State would want to engage local governments in dialogue and work collaboratively with local governments to reduce negative impacts. Exhibit ES-1 presents the key elements of each plan scenario.

These scenarios present the realistic bookends of a range of service and capital investments that seek to balance service goals and long-term funding requirements. As noted above, these also reflect input received on the December 19, 2008 Draft Plan.

There are many choices possible between the alternate visions described in these scenarios, each with a different set of cost and funding impacts. Thus, the purpose of these Revised Draft Plan scenarios is to fully describe the likely bookends of this policy challenge as a way of starting the deliberative process.



Exhibit ES-1 Summary of Plan Scenarios

Scenario A Scenario B

Service Program

Maintain service at existing levels except:

Restore 2-boat service at Pt Townsend-Keystone (22 weeks) Break-up Fauntleroy triangle by adding the Hiyu:

Run 2-boats Fauntleroy-Vashon Run 1-boat Vashon-Southworth

Run 1-boat Fauntleroy-Southworth Strategically slow vessels to optimize fuel consumption

Marginal capacity increases due to new vessel procurements on:

Anacortes-San Juan Islands

Mukilteo-Clinton

Seattle-Bremerton

Fauntleroy-Vashon

Fauntleroy-Southworth

Point Defiance-Tahlequah

Implement operational and pricing strategies

Reservation system for vehicles at no extra fee

Transit enhancements to promote walk-ons

Increase passenger fares at half the rate of vehicle fares Implement an automatic fuel surcharge to address price risk

Capital Program

Preserve and maintain existing terminals and vessels
Purchase 11 new vessels to replace retired and retiring vessels
Invest in a new reservation system
Make transit supportive investments at selected terminals
Invest in selected terminals to maintain service frequency/reliability
Add a tie-up slip at Southworth to support additional service

Service Program

Same as Scenario A except:

Close Anacortes-Sidney in September 2009

Reduced San Juan Domestic service when Sidney boat removed

Keep Port Townsend-Keystone at one boat year-round Downsize Point Defiance-Tahlequah (Hiyu) ('09-11)

Reduce Bremerton to one boat year-round ('11-'13)

Eliminate night service on Edmonds, except summer ('11-'13)

Reduce Vashon-Southworth-Fauntleroy to two boats ('11-'13)

Eliminate Mukilteo extra summer weekend service (starting 2013)

Implement operational and pricing strategies

Reservation system for vehicles at no extra fee

Transit enhancements to promote walk-ons

Increase passenger fares at half the rate of vehicle fares

Implement an automatic fuel surcharge to address price risk

Capital Program

State System, same as Scenario A except:

Purchase 5 new vessels (6 fewer)

Eliminate terminal improvements targeting loading and unloading Eliminate some terminal improvements targeting transit enhancements

In developing Scenario B, the objective was to maintain a core ferry system that preserved all the domestic routes, while reducing capital costs as much as possible. Scenario B also continues the operational and pricing strategies outlined in Scenario A.

Vessel procurements are a key element of the capital program necessary to support either Plan scenario. Under Scenario A, there would be a need for 11 new vessels plus a significant reinvestment in an existing vessel to extend its life beyond its current retirement date. Under Scenario B, the vessel procurements are significantly reduced, with a total of five new vessels acquired. Exhibit ES-2 presents the vessel procurement schedules for each Plan scenario.

The smaller fleet necessary to support Scenario B is the primary factor in the cost differences between the two options, as this leads to lower vessel preservation needs (both because of a smaller fleet and due to early retirements), fewer vessel deployments, and lower operating costs. Beyond the difference in number of vessels, Scenario B also replaces a Super Class vessel (144-car capacity) with a small vessel (between 40 and 50 vehicles in size).

In both Plan scenarios, the Hyak (144-car vessel) would be refurbished, for approximately \$20 million, which will extend its life until 2032.

Exhibit ES-2 Vessel Procurement Plan

Year	Vessel	Notes				
SCENARIO A						
2010 2011 2011	Island Home #1 Island Home #2 Hyak reinvestment	Replace a Steel Electric (Port Townsend) Replace a Steel Electric (Port Townsend) Invest in the Hyak to extend life 20 years				
2012 2013	Island Home #3 144-car vessel #1	Replace the Rhododendron (go to Point Defiance) Replace the Evergreen State				
2017	144-car vessel #2 144-car vessel #3 144-car vessel #4	Restore standby/reserve capacity; Hyak moved to standby Replace the Tillikum Replace the Klahowya				
2023	144-car vessel #5 144-car vessel #6 144-car vessel #7	Replace the Elwha Replace the Kaleetan Replace the Yakima				
	Small Vessel #1	Replace the Hiyu				
	SCENARIO B					
	Island Home #1 Hyak reinvestment Small Vessel #1 Small Vessel #2 144-car vessel #1 144-car vessel #2	Replace a Steel Electric (Port Townsend) Invest in the Hyak to extend life 20 years Replace the Elwha Replace the Hiyu Replace the Kaleetan Replace the Yakima				

1.7 Costs and Funding Needs

As presented in Exhibit ES-3, both Plan scenarios would need additional funding to balance the capital program. However, the funding gap over the 22-year planning horizon in Scenario B (\$1.3B) is less than 40% of the gap for Scenario A (\$3.3B), both figures in year-of-expenditure (YOE) dollars. This is entirely a function of the size of the ferry system under each plan scenario, in particular the smaller fleet needs of Scenario B.

Exhibit ES-3
Funding Implications of Draft Plan Options
(YOE\$ in millions)

	Scenario A LRP (22-Yr)	Scenario B LRP (22-Yr)
CAPITAL		
Terminals	\$1,580	\$1,475
Vessels	\$3,424	\$2,328
Miscellaneous Uses	\$453	\$203
Existing Debt Service	\$212	\$212
Total capital needs	\$5,669	\$4,218
Dedicated capital funds	\$829	\$829
Administrative Transfers	\$1,126	\$1,126
Federal Funds	\$347	\$347
Bond Proceeds	\$241	\$241
Net Funding Capital Program	(\$3,126)	(\$1,675)
OPERATING		
Operating revenues	\$5,286	\$4,982
Operating expenses	\$6,396	\$5,532
Net operating income/(subsidy)	(\$1,110)	(\$550)
Average farebox recovery rate	83%	90%
Dedicated operating taxes	\$809	\$809
Administrative Transfers	\$88	\$88
Estimated Subsidy Available	\$897	\$897
Net operating surplus/(deficit)	(\$213)	\$347
Total Funding Needs for 2030 Ferry Plan	(\$3,339)	(\$1,328)

Scenario A. Scenario A would result in a net funding gap of \$3.1B in the capital program. With addition of the operating deficit, the total gap is \$3.3B,

- Ridership growth and fare increases result in an average farebox recovery rate of 83%.
- Base fare assumptions assume current legislative average annual increases of 2.5%. Fuel surcharges are set to cover the

- increased costs of fuel associated with variances on fuel prices beyond the long-term average cost of fuel.
- Funding assumes that WSF will receive the \$88 million in administrative transfers over the next three biennia (per the 2008 Legislative 16-Year Plan).

The Scenario A capital program is estimated to total \$5.7 billion (in year of expenditure dollars) over the 22-Year Long-Range Plan horizon. These investments would include:

- Vessel preservation needs of \$1.5 billion
- Vessel construction of \$1.8 billion (11 new vessels)
- Vessel improvements of \$88 million
- Terminal preservation needs of \$1.1 billion
- Terminal improvements of \$440 million
- Other (existing debt service, management & support, emergency repairs) \$670 million

To fund the capital needs of Scenario A will require \$3.1 billion more than current assumed funding (or approximately \$280 million per biennium over the 22-year planning horizon). Revenues include assumed transfers from the Motor Vehicle or Multimodal Accounts in the legislative 16-Year Plan (continued through 2031).

Scenario B. Scenario B would result in a net funding gap of \$1.7B in the capital program, while the operating program would produce a net surplus in tax revenues of approximately \$350 million. If the excess operating taxes are transferred to support capital, the net funding gap for Scenario B is estimated to be \$1.3B.

The operating costs for Scenario B are estimated to be \$5.5 billion over the 22-Year Long-Range Plan horizon. Scenario B operating revenues are estimated to be \$5.0 billion over the same period, leaving only \$550 million to be funded from the dedicated operating subsidy.

- Projected ridership growth and fare increases result in an average farebox recovery rate of 90%, with the same fare assumptions as in Scenario A.
- With dedicated tax subsidies of almost \$900 million over 22 years, there would be an estimated tax subsidy surplus in the operating account of approximately \$350 million, which would be available to support capital needs.

The capital program proposed for Scenario B is estimated to total \$4.2 billion over the 22-Year Long-Range Plan horizon. Most of the savings in the capital program can be traced to the smaller fleet, which results in fewer new vessel procurements and lower fleet

preservation costs. To fund the capital needs of the Revised Draft Plan Scenario B will require \$1.7 billion more than current assumed capital funding, which includes:

- Assumptions about transfers consistent with those in Scenario A.
- The capital funding gap is weighted with several vessel procurements in the final six years of the scenario. As a result, the 16-year funding gap is only \$730 million, or less than half of the full 22-year gap.
- Looking at only the 16-year legislative planning horizon, the overall funding gap is half as much at approximately \$620 million, or \$77 million per biennium (ranging from no gap to \$170 million per biennium).

Scenario B still shows a capital funding gap, even after the significant reductions in service and capital investments discussed above. To close this gap would require additional revenues, higher fares, or additional service and investment reductions or some combination of thereof. It is important to note that further service reductions that might make a meaningful impact on the funding gap would likely require closing some domestic routes.

NEXT STEPS

The next step in developing a Final Long-Range Plan is for the Legislature to review the issues, options, and policy choices presented in this document in tandem with the results of the other legislatively required ferry reports (Funding Study and various JTC studies) and weigh in on the key strategic questions. After the legislative session, once WSF has received direction from the Legislature, a Final Plan will be developed. WSF hopes to continue the civic engagement that has been a vital part of this process and encourages citizens to contact their Legislators with comments. To facilitate this process, the ferry system will continue to receive comments and transmit them to the Legislature.

For more information:

- Email wsfplanning@wsdot.wa.gov
- Write Washington State Ferries, Attn. Joy Goldenberg, 2901 3rd Ave., Seattle, WA 98121.

BACKGROUND AND CONTEXT		
1. Introduction	1	
1.1 WSDOT Ferries Division (Washington State Ferrie	es/WSF) 2	
1.2 Purpose of the Long-Range Plan	4	
2. Policy Framework		
2.1 Washington Transportation Plan	7	
2.2 ESHB 2358 The "Ferry Bill"	8	
2.3 What factors must WSF consider in developing the	nis Plan? 11	
3. Financial Sustainability	13	
3.1 Historical Context	14	
3.2 Funding for WSF Post I-695	15	
3.3 What is WSF Doing to Keep Costs Down?	16	
PUBLIC AND STAKEHOLDER INVOLVEMENT	21	
4. Planning Process	21	
4.1 Technical and Policy Review Teams	21	
4.2 Public Outreach and Stakeholder Involvement	22	
5. Draft Plan Outreach		
5.1 Public Involvement	23	
5.2 Key Themes	24	
5.3 Summary of Changes to Draft Plan	28	
OUR CUSTOMERS: RIDERSHIP AND DEMAND		
6. Current Ridership	31	
6.1 What Did We Learn from Recent Survey Efforts?	32	
7. Demand Forecasts	37	
7.1 Updated Process for Demand Forecasting	37	
7.2 How much ridership is expected?	38	
7.3 Implications of Demand Forecasts	43	
CUSTOMER SERVICE: LEVEL OF SERVICE STAN	DARDS 47	
8. Current Standards		
8.1 Current Standards	47	
8.2 Need to Re-establish Vehicle LOS Standards	48	
9. Changing the Vehicle LOS Measure	49	
9.1 Changing the Vehicle LOS Measure	49	
9.2 A Framework for Setting LOS Standards	50	
10. LOS Implementation Issues	57	

OPER	ATIONS: ADAPTIVE MANAGEMENT STRATEGIES	59
11. Transit Enhancements		
12. Vehicle Reservations		
13. Other operational Strategies		69
13.1	Fuel Saving Strategies	69
13.2	Other Operating Strategies	71
14. Pric	ing	73
14.1	Pricing and a Reservation System	74
14.2	Fuel Surcharge	74
14.3	Differential Vehicle and Passenger Pricing	75
14.4	Other Pricing Strategies	76
REVIS	ED DRAFT PLAN SCENARIOS	81
15. Sce	nario A	82
15.1	Operating Program	83
15.2	Capital Program Needs	86
15.3	Funding Implications	97
16. Scenario B		101
16.1	Operating Program	102
16.2	Capital Program	103
16.3	Funding Implications	106
NEXT :	STEPS	111
Technic	al Appendices	
Α	Summary of Legislative Requirements	
В	Terminal Design Standards	
С	List of Participants	
D	Ridership Forecasting Technical Report	
Е	Operating Strategies Evaluation	
F	Proposed Transit Enhancements by Terminal	
G	Vehicle Reservation System Details by Route	
Н	Pricing Strategies Evaluation	
1	Environmental Considerations	
J	One-Point Toll Collection Technical Memorandum	
K	Agency and Stakeholder Comments on Draft Plan	
L	Public Comments on Draft Plan	